

REMARKS

After entry of this amendment, claims 2-10, 12-20, 22-27, and 29-35 remain pending. In the present Office Action, claims 2-3, 8, 12-14, 18, 22-23, 29-32, 35, and 40-44 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kozakura, U.S. Patent No. 5,724,581 ("Kozakura"). Claims 4-5, 9-10, 19-20, and 24-25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kozakura in view of Fuller, U.S. Patent No. 5,870,757 ("Fuller"). Claims 6-7, 16-17, 26-27, and 33-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kozakura in view of Zheng et al., U.S. Patent No. 6,571,259 ("Zheng"). Applicant respectfully traverses these rejections and requests reconsideration.

Claims 2-7, 12-20, 22-27, and 29-35

Applicant respectfully submits that each of claims 2-7, 12-20, 22-27, and 29-35 recites a combination of features not taught or suggested in the cited art. For example, claim 2 recites a combination of features including: "a non-volatile memory storing a first inode locating said first file in said storage and also storing a journal comprising a list of committed inodes; and a block manager ... configured to atomically update said first file in response to a commit of said first file by writing said second inode to said non-volatile memory, ... record said second inode in said journal".

The present Office Action alleges that the inodes are taught in Kozakura as the page tables that locate the latest physical page storing the latest update and the shadow physical page storing data before the latest update. The Office Action also refers to Kozakura's log file, which stores the log of the transaction, presumably alleging that the log file teaches the journal recited above. However, Kozakura's log file does not store a list of committed page tables. Accordingly, the log file cannot teach or suggest "a journal comprising a list of committed inodes". The page table data structures cannot be a journal, since these are updated as transactions progress and thus do not comprise a list of committed inodes.

The Office Action also refers to Kozakura's creation of checkpoints of page table

data. However, these checkpoints are not related to a commit command. Rather, they are performed cyclically or at a given time (Kozakura, col. 2, lines 48-49), or when no transactions are in progress (Kozakura, col. 2, lines 59-61).

Kozakura teaches: "A log recording unit 12 writes the log information about each transaction to the log file 11 at the completion of each transaction. ... With this configuration, the log information about each transaction stored in the log file 11 can comprise at least a flag indicating the start of a transaction, an identifier uniquely assigned to a transaction, history information about a data base operation for a transaction, and a flag indicating the end of a transaction. The history information about the data base operation of a transaction can comprise at least a set of information indicating the type of data base operation, information indicating a logical page on which the data base operation was performed, information indicating the physical page on which data before the latest update on the logical page are stored, and information indicating the physical page on which updated data on the logical page are stored. The set of information can be recorded in time series for operations executed in the transaction and associated with the update of all data bases." (Kozakura, col. 6, lines 58-59 and col. 6, line 66-col. 7, line 15). Thus, the log file does not store page tables.

For at least the above stated reasons, Applicant submits that the rejection of claim 2 over Kozakura is not supported, and should be withdrawn. Claims 3-7 depend from claim 2, and thus the rejection of these claims should be withdrawn for at least the above stated reasons as well. Each of claims 3-7 recite additional combinations of features not taught or suggested in the cited art.

Claim 12 recites a combination of features including: "atomically updating said first file by establishing said second inode as the inode for said first file, wherein said establishing comprises storing said second inode in a journal stored in a nonvolatile memory". The same teachings of Kozakura highlighted above with respect to claim 2 are relied on to reject claim 12. Therefore, the rejection of claim 12 over the alleged combination of Kozakura is also not supported, and should be withdrawn. Claims 13-20

depend from claim 12, and thus the rejection of these claims should be withdrawn for at least the above stated reasons as well. Each of claims 13-20 recite additional combinations of features not taught or suggested in the cited art.

Claim 22 recites a combination of features including: "a non-volatile memory storing a first inode locating a first version of a file in said storage and also storing a journal comprising a list of committed inodes; and a block manager ... configured to atomically update the file, producing a second version of the file, in response to a commit of the file by writing said second inode to said non-volatile memory... and wherein said block manager is configured to record said second inode in said journal". The same teachings of Kozakura highlighted above with respect to claim 2 are relied on to reject claim 22. Therefore, the rejection of claim 22 over the alleged combination of Kozakura is also not supported, and should be withdrawn. Claims 23-27 depend from claim 22, and thus the rejection of these claims should be withdrawn for at least the above stated reasons as well. Each of claims 23-27 recite additional combinations of features not taught or suggested in the cited art.

Claim 29 recites a combination of features including: "atomically updating the file to the second version by establishing said second inode as the inode for the file, wherein said establishing comprises storing said second inode in a journal stored in a nonvolatile memory". The same teachings of Kozakura highlighted above with respect to claim 2 are relied on to reject claim 29. Therefore, the rejection of claim 29 over the alleged combination of Kozakura is also not supported, and should be withdrawn. Claims 30-35 depend from claim 29, and thus the rejection of these claims should be withdrawn for at least the above stated reasons as well. Each of claims 30-34 recite additional combinations of features not taught or suggested in the cited art.

Claims 8-10

Applicant respectfully submits that each of claims 2-7, 12-20, 22-27, and 29-35 recites a combination of features not taught or suggested in the cited art. For example, claim 2 recites a combination of features including: "said first inode is stored in an inode

file, and wherein said inode file is identified by a master inode, and wherein said inode file is atomically updated with said second inode by writing said master inode subsequent to said commit command".

The Office Action relies on the same teachings highlighted above with regard to claim 2 to allegedly teach the features of claim 8. No teachings of Kozakura cited in the rejection have anything to do with the above features. Furthermore, as noted above, the Office Action alleges that Kozakura's page tables correspond to inodes. However, there is no page table file, identified by a master page table, in Kozakura. Therefore, Kozakura cannot teach or suggest the above highlighted features of claim 8.

For at least the above stated reasons, Applicant submits that the rejection of claim 8 over Kozakura is not supported, and should be withdrawn. Claims 9-10 depend from claim 8, and thus the rejection of these claims should be withdrawn for at least the above stated reasons as well. Each of claims 9-10 recite additional combinations of features not taught or suggested in the cited art.

Claim Objection

Claims 9-10 were objected to because they were dependent from claim 6, but should be dependent from claim 8. Applicant has amended claims 9-10 to depend from claim 8, and thus submits that the objection is addressed.

CONCLUSION


Applicant submits that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-59100/LJM.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Request for Approval of Drawing Changes
- ☐ Notice of Change of Address
- ☐ Please debit the above deposit account in the amount of \$ for fees ().
- ☐ Other:

Respectfully submitted,



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✓ AGENT FOR APPLICANT(S)

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